

In re Application of: Benjamin GEIGER  
 Serial No.: 10/524,275  
 Filed: February 11, 2005  
 Office Action Mailing Date: October 1, 2007

Examiner: Karen C. CARLSON  
 Group Art Unit: 1656  
 Attorney Docket: 29140

**In the Claims:**

1-15. (Cancelled)

16. (Currently Amended) A method of ~~highlighting a cell compartment, detecting a biological component or macromolecule in an organism or virus to determine the presence or absence of said~~ a cell compartment, of a cell or a biological component or macromolecule of the cell, the method comprising:

(a) ~~providing expressing a polynucleotide encoding a chimeric polypeptide to in the organism~~ the cell or virus, said chimeric polypeptide including:

(i) a first polypeptide region being capable of specifically binding at least one detectable molecule; and

(ii) a second polypeptide region being capable of specifically binding the ~~biological component or macromolecule of the organism~~ of the cell or virus; or targeting into a specific cell compartment; and

(b) exposing the ~~organism~~ cell or virus to said detectable molecule under conditions suitable for binding of said detectable molecule to said first polypeptide region;

(c) ~~analyzing wherein a presence of said detectable molecule is indicative of thereby highlighting the cell compartment biological component or macromolecule in the organism or virus and determining the presence or absence of said~~ in the cell compartment of the cell, biological component or in association with said macromolecule of the cell, thereby detecting the compartment of the cell or macromolecule of the cell.

17. (Currently Amended) The method of claim 16, wherein the ~~organism~~ cell is selected from the group consisting of a bacterium cell, a protozoa cell, a fungus cell, a yeast cell, an algae cell, a plant cell and an animal cell.

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18. (Currently Amended) The method of claim 16, wherein step (a) is effected by ~~providing-transfecting~~ a nucleic acid construct encoding said chimeric polypeptide ~~and~~ expressing said chimeric polypeptide within ~~the organism~~ into the cell or virus.

19. (Currently Amended) The method of claim 16, wherein step (b) is effected by ~~administering-contacting~~ said cell and said detectable molecule in a culture medium ~~to the organism or virus~~.

20. (Original) The method of claim 16, further comprising a step of visualizing said detectable molecule.

21. (Original) The method of claim 20, wherein said visualizing is effected using a microscope.

22. (Original) The method of claim 21, wherein said microscope is equipped with a light source.

23-41. (Cancelled)

42. (Previously Presented) The method of claim 16, wherein said first polypeptide region comprises a single chain Fv and said second polypeptide region comprises S-AKAP84.

43. (Cancelled)

44. (Currently Amended) A method of ~~highlighting-detecting~~ a ~~cell~~ compartment ~~of a cell or biological component in an organism or virus~~ comprising:

(a) ~~providing-expressing~~ a polynucleotide encoding a chimeric polypeptide ~~to the organism or virus~~ in the cell, said chimeric polypeptide including:

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(i) a first polypeptide region being capable of specifically binding at least one detectable molecule; and

(ii) a second polypeptide region being capable of ~~specifically binding the biological component of the organism or virus; or~~ targeting into a specific cell compartment; and

(b) exposing the ~~organism or virus~~cell to said detectable molecule under conditions suitable for binding of said detectable molecule to said first polypeptide region; and

(c) analyzing a presence of said detectable molecule in the compartment of the cell, thereby detecting the compartment of ~~thereby highlighting the cell compartment or biological component in the organism or virus.~~

45. (Currently Amended) The method of claim 44, wherein the ~~organism cell~~ is selected from the group consisting of a bacterium cell, a protozoa cell, a fungus cell, a yeast cell, an algae cell, a plant cell and an animal cell.

46. (Cancelled)

47. (Currently Amended) The method of claim 44, wherein step (a) is effected by ~~providing~~ transfecting a nucleic acid construct encoding said chimeric polypeptide and ~~expressing said chimeric polypeptide within the organism or virus~~ into the cell.

48. (Currently Amended) The method of claim 44, wherein step (b) is effected by ~~administering~~ contacting said cell and said detectable molecule ~~to the organism or virus~~ in a culture medium.

49. (Previously Presented) The method of claim 44, further comprising a step of visualizing said detectable molecule.

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50. (Previously Presented) The method of claim 49, wherein said visualizing is effected using a microscope.

51. (Previously Presented) The method of claim 50, wherein said microscope is equipped with a light source.

52–61. (Cancelled)

62. (New) The method of claim 16, wherein the second polypeptide region comprises a domain selected from the group consisting of a a cell adhesion molecule binding domain, a membrane anchor protein domain, a human SDH Q-reductase domain, a growth factor receptor domain, a receptor binding domain, a protein kinase AII domain, a cellulose binding domain, a lipid binding domain, a polynucleotide binding domain, a tubulin binding domain and an actin binding domain.

63. (New) The method of claim 44, wherein the second polypeptide region comprises a domain selected from the group consisting of a a cell adhesion molecule binding domain, a membrane anchor protein domain, a human SDH Q-reductase domain, a growth factor receptor domain, a receptor binding domain, a protein kinase AII domain, a cellulose binding domain, a lipid binding domain, a polynucleotide binding domain, a tubulin binding domain and an actin binding domain.